

DECLARATION

I, Stefan Richter, An der Schule 5, D – 95491 Ahorntal, Federal Republic of Germany, to my best knowledge declare the following:

1. I am one of the inventors of an invention which has been filed with the U.S. Patent and Trademark Office as a patent application Ser. No. 10/668,183 on September 24, 2003, claiming the priority of the first application Ser. No. 102 44 671.7 in Germany.
2. I am fully experienced in the design and manufacturing of adjustable-length compression springs and in particular in the design and manufacturing of valves in such compression springs.

Furthermore, I am familiar with the prior art cited by the U.S. PTO in connection with our aforesaid invention.

3. Adjustable-length compression springs in form of gas springs are well-known and very common to many applications. However, with respect to flexibility of application the known compression springs still offer possibilities of improvement, in particular it is required a movability of the piston rod relative to the casing even when the compression spring is blocked.
4. When we thought about solving the aforementioned problem we were very surprised that overload valves in compression springs can be designed such that a compression spring can be provided with the additional function of overcoming the blocking of the controllable valve at a very low force limit compared to an overload force limit.
5. Once, we have realized that the concept of an overload valve also could be applicable to include the desired additional function of overcoming the blocking of the controllable valve at a very low force limit, we developed a simply constructed and very cost-efficient automatic valve.
6. Our application discloses a compression spring with an automatic additional valve for interconnecting the sectional casing chambers by an automatic overflow connection. The automatic valve of our invention comprises a valve element in form of an annular disk, which is received with an inward peripheral area in a coaxially designed groove and which is axially pre-loaded in the way of a saucer spring in a shut-off position. By using an annular disk the valve element simultaneously

serves as spring element and sealing element. Furthermore, the automatic overflow connection can be disposed outside of the controllable valve. Hence, the automatic valve of our invention has a simple and cost-efficient construction. In order to determine the correct force limit of the automatic valve a lot of experimental work was required which was far from being routine.

7. Neither U.S. patent 5,116,028 (MINTGEN et al.) nor European patent application 1 101 972 A2 were helpful while the development of our automatic valve. The overload valves disclosed in U.S. patent 5,116,028 and European patent application 1 101 972 A2 have a very complex construction and comprise a lot of components. Hence, these overload valves gave us no idea how to construct a very simple and cost-efficient automatic valve.
8. The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 23.06.05

Place: Sulzbach-Rosenberg



(Stefan Richter)